

# Dipobrato Sarbapalli

(217) 979-1550 • [dipto032@gmail.com](mailto:dipto032@gmail.com) • [linkedin.com/in/dipto032/](https://www.linkedin.com/in/dipto032/) • [dipto032.github.io](https://github.com/dipto032)

## PUBLICATIONS

---

*From Doctoral Thesis research*

1. Yunxiong Zeng, Zachary T. Gossage, [Dipobrato Sarbapalli](#), Jingshu Hui and Joaquín Rodríguez-López. “Tracking Passivation and Alkali Ion Flux at Incipient Solid-Electrolyte Interphases on Multi-Layer Graphene with Sub-Micron Electrochemical Imaging” *ACS Nano* **2021**. (*In preparation*)
2. Abhiroop Mishra, [Dipobrato Sarbapalli](#), Md. Sazzad Hossain, Zachary T. Gossage, Alexander Urban and Joaquín Rodríguez-López. “In-Situ, Real-Time Detection of Oxygen Evolution from Battery Cathodes Using Scanning Electrochemical Microscopy” *ACS Energy Lett.* **2021**. (*In preparation*)
3. [Dipobrato Sarbapalli](#), Jingshu Hui, A. Nijamudheen, Abhiroop Mishra, Adolfo Romo Barros, Jose Luis Mendoza-Cortes and Joaquín Rodríguez-López. “Exploring Na-ion charge storage in fluorinated few layer graphene” *J. Phy. Chem. C* **2021**. (*In preparation*)
4. [Dipobrato Sarbapalli](#), Abhiroop Mishra and Joaquín Rodríguez-López. “Pt/Polypyrrole Quasi-References Revisited: Robustness and Application in Electrochemical Energy Storage Research” *Anal. Chem.* **2021**. (*Submitted*)
5. Zachary T. Gossage, Kendrick Hatfield, Yuanya Zhao, Raghuram Gaddam, [Dipobrato Sarbapalli](#), Abhiroop Mishra and Joaquín Rodríguez-López. *Application to Batteries and Fuel Cells* in [Scanning Electrochemical Microscopy](#), Taylor & Francis. (*Submitted*)
6. [Dipobrato Sarbapalli](#), Abhiroop Mishra, Zachary T. Gossage, Kendrick Hatfield, and Joaquín Rodríguez-López. *Scanning Electrochemical Microscopy: A Versatile Tool for Inspecting the Reactivity of Battery Electrodes* in [Batteries: Materials Principles and Characterization Methods](#), IOP Science. (*Submitted*)
7. Abhiroop Mishra, Zachary T. Gossage, [Dipobrato Sarbapalli](#), Yuanya Zhao, and Joaquín Rodríguez-López. *Methods and Instrumentation in Energy Storage* in [Encyclopedia of Electrochemistry](#), Wiley-VCH. (*Submitted*)
8. Jingshu Hui, A. Nijamudheen, [Dipobrato Sarbapalli](#), Chang Xia, Zihan Qu, Jose L. Mendoza-Cortes, and Joaquín Rodríguez-López. “Nernstian Li<sup>+</sup> intercalation into few-layer graphene and its use for the determination of K<sup>+</sup> co-intercalation processes” *Chem. Sci.* **2021**, 12, 559-568. DOI: [10.1039/D0SC03226C](https://doi.org/10.1039/D0SC03226C)
9. Michael J. Counihan, [Dipobrato Sarbapalli](#), and Joaquín Rodríguez-López. “Picture Your Electrode: A Primer on Scanning Electrochemical Microscopy” *Electrochem. Soc.*

- Interface*. **2020**, *29*, 30–32. DOI: [10.1149/2.f03203if](https://doi.org/10.1149/2.f03203if)
10. A. Nijamudheen, [Dipobrato Sarbapalli](#), Jingshu Hui, Joaquín Rodríguez-López, and Jose L. Mendoza-Cortes. “Impact of Surface Modification on the Lithium, Sodium, and Potassium Intercalation Efficiency and Capacity of Few-Layer Graphene Electrodes” *ACS Appl. Mater. Interfaces*. **2020**, *12*, 19393–19401. DOI: [10.1021/acsami.9b23105](https://doi.org/10.1021/acsami.9b23105)
  11. Zachary T. Gossage, Jingshu Hui, [Dipobrato Sarbapalli](#), and Joaquín Rodríguez-López. “Coordinated mapping of Li<sup>+</sup> flux and electron transfer reactivity during solid-electrolyte interphase formation at a graphene electrode” *Analyst*. **2020**, *145*, 2631–2638. DOI: [10.1039/C9AN02637A](https://doi.org/10.1039/C9AN02637A)
  12. Tylan S. Watkins\*, [Dipobrato Sarbapalli](#)\*, Michael J. Counihan\*, Andrew S. Danis, Jingjing Zhang, Lu Zhang, Kevin R. Zavadil, and Joaquín Rodríguez-López. “A combined SECM and electrochemical AFM approach to probe interfacial processes affecting molecular reactivity at redox flow battery electrodes” *J. Mater. Chem. A* **2020**, *8*, 15734–15745. DOI: [10.1039/D0TA00836B](https://doi.org/10.1039/D0TA00836B)
  13. Jingshu Hui, Zachary T. Gossage, [Dipobrato Sarbapalli](#), Kenneth Hernández-Burgos, and Joaquín Rodríguez-López. “Advanced Electrochemical Analysis for Energy Storage Interfaces” *Anal. Chem.* **2019**, *91*, 60–83. DOI: [10.1021/acs.analchem.8b05115](https://doi.org/10.1021/acs.analchem.8b05115)

---

\*Denotes equal contribution

### *From Masters Thesis research*

14. [Dipobrato Sarbapalli](#), Xu Chen, Leslie Struble and Paramita Mondal. “Salicylic acid extraction of sodium aluminosilicates” *J. Amer. Cer. Soc.* **2021** (*In preparation*)

### *From Undergraduate research*

15. [Dipobrato Sarbapalli](#), Yash Dhabalia, Kaustav Sarkar and Bishwajit Bhattacharjee. “Application of SAP and PEG as curing agents for ordinary cement-based systems: impact on the early age properties of paste and mortar with water-to-cement ratio of 0.4 and above” *Eur. J. Environ. Civ. Eng.* 2017, *21*, 1237–1252. DOI: [10.1080/19648189.2016.1160843](https://doi.org/10.1080/19648189.2016.1160843)

## CONFERENCE PAPERS

---

1. [Dipobrato Sarbapalli](#) and Paramita Mondal, “Effect of TiO<sub>2</sub> and ZnO nanopowders on metakaolin-sodium hydroxide geopolymers” *Proceedings of the 41st International Conference on Advanced Ceramics and Composites*, **2018**, *38*, 251–262

## POSTERS

---

1. [Dipobrato Sarbapalli](#), Abhiroop Mishra and Joaquín Rodríguez-López. “Pt/Polypyrrole quasi-references revisited: Robustness and application in non-aqueous electrochemical energy storage research” *Turkey Run Analytical Chemistry Conference*, **2021**
  2. [Dipobrato Sarbapalli](#), Jingshu Hui, A. Nijamudheen, Jose L. Mendoza-Cortes, and Joaquín Rodríguez-López. “Few-layer graphene as a versatile analytical platform for exploring reversible Na<sup>+</sup> charge storage aided by fluorine surface modifiers” Society of Electroanalytical Chemistry Poster Session, *PITTCON*, **2021**
  3. [Dipobrato Sarbapalli](#), Michael Counihan, Andrew Danis and Joaquín Rodríguez-López. “Application of electrochemical microscopy probe interfacial processes at redox flow battery electrodes” Society of Electroanalytical Chemistry Poster Session, *PITTCON*, **2020** (Best Poster Award)
  4. [Dipobrato Sarbapalli](#), Michael Counihan, Andrew Danis and Joaquín Rodríguez-López. “Understanding interactions of redox-active organic molecules with carbon electrodes” *Turkey Run Analytical Chemistry Conference*, **2019**
- 

Google Scholar: <https://bit.ly/3c9oQqC>

Scopus: <https://cutt.ly/5bQJqvm>